

17-Sep-2007 10:03

CLARIANT BG LACK

Nr. 2557 S. 1

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PATENT

In re Application of: Joachim WEBER et al.

Docket: 2003DE130

Serial No.: 10/571,478

Group Art Unit: 1755

Filed: March 10, 2006

Examiner: GREEN, A.

For: **Pigment Compositions Consisting of Organic and Inorganic Pigments****DECLARATION UNDER 37 CFR § 1.132**

1. I, Gerhard Wilker, state that I am a resident of D-64546 Moerfelden-Waldorf, Federal Republic of Germany; that I am a citizen of the Federal Republic of Germany; that I am a chemist engineer having graduated at the Technical University of Darmstadt, Federal Republic of Germany; that I am one of the inventors of U.S. Patent Application Serial No. 10/571,478; for "Pigment Compositions Consisting of Organic and Inorganic Pigments," that I consider myself qualified, by my knowledge of chemistry, and especially of organic pigments and by my 41 years' experience in this field; that I can make the following statements:

2. In order to show that the pigment preparations of U.S. Patent Application Serial No. 10/571,478 display a significantly less bleeding effect on white overpainted coatings compared to pigment preparations according to US Patent No. 6,284,035 the following experiments were carried out.

Test criteria: Fastness to overpainting in a common water born base coat (full shade) with a final pigment ratio of 1:1.

Amongst others this criteria is important for use of the pigment compositions in high performance automotive coatings.

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8a) and 1.10

I hereby certify that this correspondence is, on the date shown below, being transmitted by facsimile to the U.S. Patent and Trademark Office. (Fax No. (571) 273-8300 (3 pages))

Vicki L. Sgro: Date of Mailing: 9-20-07

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Attorney's Docket: 2003DE130

Serial No.: 10/571,478

Art Unit 1755

Response to Office Action, Dated 05/23/2007

Preparation of the water born base paints (see Table 1)

A defined mill base of each pigment is dispersed for 60 min in a dispersing device with 3 mm glass beads. After dispersion a required quantity of clear compensation lacquer is added. The composition is shaken for further 5 min to get a homogenous mixture and is then adjusted to the scheduled full shade concentration with clear adjustment lacquer. Again the mixture is shaken for 5 minutes to achieve homogeneity. The finished full shade lacquer is filtered of from the glass beads and finally centrifuged for 10 sec for rapid defoaming. The single pigmented full shade lacquers are combined so that the target pigment ratio of 1:1 is achieved in the finally tested lacquers, which are again shaken for 10 min to assure complete homogeneity.

Table 1: Pigment concentrations

Used for the following pigments:	P.Y. 138 P.Y. 213	P.Y. 184
% Pigment in the mill base	30.00	50.00
For dispersing		
Water-based paint dispersion medium 16%	20.90	14.90
Agitan 701/100%	0.10	0.10
Pigment	9.00	15.00
Mill base	30.00	30.00
For step-by-step let down		
1st step/intermediate adjustment clear compensation lacquer 24.2%	43.60	31.09
Intermediate adjustment	73.60	61.09
% Pigment in the intermediate adjustment	~12.27	24.55
2nd stage/final adjustment		
Taken from the intermediate adjustment	50.00	—
Clear adjustment lacquer 24.7%	26.43	1.41
Total	76.43	62.50
% Pigment in the final adjustment/full shade	8.00	24.00
Part used for final tested pigment combinations	3	1

Preparation for testing:

The full shade lacquers with the defined pigment ratios of 1:1 are drawn down next to one another on a glass plate at a 150 µm wet film thickness using a four fold film applicator with approx. ¼ of the upper half of the glass plate remaining clear. After a flash off time of 20 minutes, the paint drawdowns are force-dried for 20 minutes at 100 °C. Afterwards the glass plate is turned through 180°. A white paint is coated. ¾ of the total surface, including the ¼ area kept free, with a wet film thickness of 200 µm using the film applicator. The white paint is flashed off for 20 minutes at room temperature, then forced-dried for 20 minutes at 120 °C in a drying oven.

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Subsequently, a stoving clear varnish is applied to 2/3 of the area coated with the white paint by means of a spraying device (approx. 40 µm dry) and, after flash-off, is stoved for 30 minutes at 140 °C and additionally stoved at 160°C in the drying cabinet.

Assessment:

The fastness to overpainting (staining) is measured by a spectrophotometer based on the dE values (total color difference, CIELAB system) between the white overpainted, coating of the particular pigment composition and a white coating.

Results:

Pigment composition Ratio 1/1	dE values	
	140°C	160°C
P.Y. 184 / P.Y. 138	2,45	2,69
P.Y. 184 / P.Y. 213	0,78	0,83
P.Y. 53 / P.Y. 175	7,83	12,56
P.Y. 53 / P.Y. 213	0,80	0,91
P.Br.24 / P.Y. 154	7,24	14,35
P.Y. 184 / P.Y.139	1,47	1,59

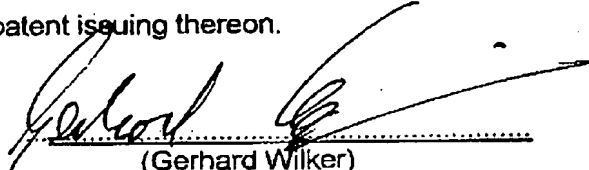
Conclusion:

The pigment combinations protected by the instant patent application show significantly less bleeding into the white overpainted coating which is shown by the lower dE values.

The results clearly show that a pigment preparation according to U.S. Patent Application Serial No. 10/571,478 has a significantly less bleeding into the white overpainted coating than the combination disclosed in the US Patent No. 6,284,035.

3. I declare that all statements made herein of my own knowledge are true and that all statements made on Information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Frankfurt on the Main
September 17, 2007


(Gerhard Wilker)